



2019 Secretary of Defense Environmental Awards Sustainability, Non-Industrial Installation Award

Each year since 1962, the Secretary of Defense (SecDef) has honored installations, teams, and individuals for outstanding conservation achievements, innovative environmental practices, and partnerships that improve quality of life and promote efficiencies without compromising the Department of Defense's (DoD's) mission success. The 2019 SecDef Environmental Awards cycle encompasses an achievement period from October 1, 2016 through September 30, 2018 (Fiscal Years (FY) 2017-2018). A diverse panel of 58 judges with relevant expertise representing Federal and state agencies, academia, and the private sector evaluated all nominees to select one winner for each of the nine categories that cover six subject areas: natural resources conservation, environmental quality, sustainability, environmental restoration, cultural resources management, and environmental excellence in weapon system acquisition.

About the Sustainability, Non-Industrial Installation Award

The Sustainability, Non-Industrial Installation award recognizes efforts by a DoD non-industrial installation of any size (large or small) including ranges, test centers, contracting and policy agencies/organizations/offices, and research and development centers to prevent or eliminate pollution at the source, including practices that increase efficiency and sustainability in the use of raw materials, energy, water, or other resources. The sustainability award also recognizes energy efficiency and renewable energy practices, greenhouse gas reduction efforts, procurement of sustainable goods and services, waste diversion, and efforts to plan for adaptation and resilience. Sustainable practices ensure that DoD protects valuable resources that are critical to mission success. The 2019 winner of the Sustainability, Non-Industrial Installation award is *Marine Corps Air Station Miramar, California*.

About Marine Corps Air Station Miramar, California

Marine Corps Air Station (MCAS) Miramar is located at the center of a network of Marine Corps and Navy installations and ranges in the Southwestern United States. Situated 13 miles north of San Diego and approximately four miles east of the Pacific Ocean, MCAS Miramar encompasses 23,065 acres of mesas and undeveloped coastal foothills. It provides air station facilities and property services, material support, and training venues to enhance combat readiness for the 3rd Marine Aircraft Wing and other tenants. With more than 15,000 civilian Marines, contracted employees, Service members and their families working and living on post and over 260 helicopters and fixed-wing aircraft assigned to the installation, MCAS Miramar is the largest air station in the Marine Corps. As such, MCAS Miramar plays an important role in the San Diego community as an economic engine and ambassador of the military mission. By continuing to pursue projects that conserve resources and improve resiliency, MCAS Miramar seeks to safeguard its role in national security for decades to come.



The Consolidated Bachelors Quarters laundry facilities installed solar panels at Marine Corps Air Station (MCAS) Miramar. The solar panels heat water before it enters the boilers to conserve energy.

Major Accomplishments in FY 2017-2018

- The MCAS Miramar Energy Program uses innovative technologies to reduce energy and water use, increase the station's resilience through renewable onsite sources, and reduce greenhouse gas emissions from transportation, facilities, and construction. An aggressive focus on energy resilience, efficiency, and awareness resulted in a \$13 million investment in research and development during FY17 and FY18 to expand microgrids, energy storage, electric vehicles, building control integration, and base-wide demand management on the installation, and a roughly \$6 million investment in physical improvements for water and energy conservation.
- In FY17, MCAS Miramar constructed an installation-wide microgrid that will provide 100% renewable energy and energy distribution capable of supporting over 100 mission-critical facilities for three weeks if disconnected from the grid.
- In FY18, MCAS Miramar negotiated with the City of San Diego to enter into an Intergovernmental Support Agreement to procure an additional 1.6 megawatts (MW) of landfill gas generated power as part of the City's Pure Water Program. This expanded MCAS Miramar's landfill gas generated power to 4.8 MW, boosting the station's renewable electricity to an unprecedented 75% of the installation's energy demand.
- In FY17 and FY18, MCAS Miramar implemented utility expansion projects to convert a significant number of major irrigation sites on the installation to reclaimed water. This increased reclaimed water infrastructure by more than five miles and provided a 47% conversion to reclaimed water irrigation. An additional project converted all of Miramar's vehicle and aircraft wash racks to isolated recirculated water systems, reducing potable water usage by 75% at those facilities.
- In FY17 and FY18, MCAS Miramar implemented a \$526,000 project to apply chemical coatings to cooling tower components to prevent corrosion, contain and prevent leaks, and reduce annual maintenance requirements by approximately 50%.
- The installation expanded innovative energy and mobility efforts by equipping six hybrid-electric passenger and cargo vans with vehicle-to-grid (V2G) technology. The V2G vehicles are emission-free and function as large mobile, rechargeable batteries that balance energy loads by charging during off-peak times and sending power back to the grid when demand is high or the electricity supply is disrupted.



MCAS Miramar hosts a 100% renewable, building-level demonstration microgrid that is capable of supporting over 100 mission-critical facilities for three weeks if disconnected from the grid. The microgrid integrates battery storage, controllable photovoltaic, electric vehicles, and complete load management within the building. The project was recognized in fiscal year 2017 as the Environmental Security Technology Certification Program project of the year and received the United States Department of Energy Federal Energy and Water Management project award.



Lance Corporals Wandley Alvarez and Zachary McGinnis, Marines assigned to MCAS Miramar's Qualified Recycling Program (QRP) as recycling personnel, sort items at the Recycling Center. The QRP is an integral component of MCAS Miramar's pollution prevention program, and generated more than \$207,000 during fiscal years 2017 and 2018. Funds support operating costs of the self-sustaining recycling program, and provide morale, welfare and recreation programs for active duty personnel.